Attachment A: NonGLP Protocol

TEST PROTOCOL

STUDY TITLE: **Wetness Testing**

NONGLP STUDY NUMBER: NonGLP 20200027

DESCRIPTION OF STUDY OBJECTIVE

The purpose of this study is to assess the wetness of a surface after electrostatic spray treatment and exposure time of the products identified. In the case of multiple timepoints for a given test condition, the longest timepoint will be tested to represent worst-case.

TEST SUBSTANCE IDENTIFICATION

Test Substance Name	EPA Reg. #	Active Ingredient	Expected Concentration Range	Formula Code
Kay Multi-Purpose Disinfectant Cleaner	1677-233	Quaternary ammonia	21.05-22.35%	914273

Test Substance Concentration: **0.5 oz/gallon** to target the lower certified limit:
Batch AD051801: 3.79 g + 996.21 g water (±0.01g)
Test Substance Diluent: 200 ppm AOAC Synthetic Hard Water
Spray Distance: 12 inches, visually estimated
Spray Time: 2 seconds
Exposure Time: 10 minutes

Test Substance Name	EPA Reg. #	Active Ingredient	Expected Concentration Range	Formula Code
S&S Sanitizer	1677-260	Dodecylbenzene-sulfonic Acid	11.4-14.4%	919871
		Lactic Acid	29.5-38.6%	

Test Substance Concentration: **0.52 oz/gallon** targeting the lower certified limit
Batch 5010EG1500 MMB62028: 4.10g + 995.90g (±0.01g)
Test Substance Diluent: 400 ppm AOAC Synthetic Hard Water
Spray Distance & Time: 7 inches, visually estimated, for 2 seconds
Exposure Time: 8 minutes

Test Substance Concentration: **0.27 oz/gallon** targeting the lower certified limit
Batch: 5010EG1500 MMB62028: 2.12g + 997.88g diluent (±0.01g)
Test Substance Diluent: 400 ppm AOAC Synthetic Hard Water
Spray Distance & Time: 7 inches, visually estimated, for 2 seconds
Exposure Time: 30 seconds

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Test Substance Name	EPA Reg. #	Active Ingredient	Expected Concentration Range	Formula Code
Vegas Nonperoxide Multi Surface Cleaner	1677 [pending]	Dodecylbenzene-sulfonic acid	9.2-10.0%	920330

Test Substance Concentration: 6 oz/gallon targeting the lower certified limit
5349EG2200 MH61461: 45.10g + 954.90g water (±0.01g)
Test Substance Diluent: 400 ppm AOAC Synthetic Hard Water
Spray Distance & Time: 12 inches, visually estimated, for 2 seconds
Exposure Time: 3 minutes (to represent a 30 second and 3 minute timepoint)

Test Substance Concentration: 4 oz/gallon targeting the lower certified limit
5349EG2200 MH61461: 30.07g + 969.93g water (±0.01g)
Test Substance Diluent: 400 ppm AOAC Synthetic Hard Water
Spray Distance & Time: 12 inches, visually estimated, for 2 seconds
Exposure Time: 5 minutes (to represent a 30 second and 5 minute timepoint)

Test Substance Name	EPA Reg. #	Active Ingredient	Expected Concentration Range	Formula Code
Peroxide Multi Surface Cleaner and Disinfectant	1677-238	Hydrogen Peroxide	7.1-9.5%	919267

Test Substance Concentration: 6 oz/gallon targeting the lower certified limit
Batch 5130JEG900: 43.09g + 956.91g water (±0.01g)
Test Substance Diluent: 400 ppm AOAC Synthetic Hard Water
Spray Distance & Time: 12 inches, visually estimated, for 2 seconds
Exposure Time: 3 minutes (to represent a 45 second and 3 minute timepoint)

Test Substance Concentration: 4 oz/gallon targeting the lower certified limit
Batch 5130JEG900: 28.73g + 971.27g water (±0.01g)
Test Substance Diluent: 400 ppm AOAC Synthetic Hard Water
Spray Distance & Time: 12 inches, visually estimated, for 2 seconds
Exposure Time: 3 minutes (to represent a 2 minute and 3 minute timepoint)

CHEMICAL QUALITY VERIFICATION OF THE TEST SUBSTANCE

A production batch certification of analysis will be included with the study file to substantiate the level of active ingredient in the test substance batches used in testing.

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WETNESS TESTING PROCEDURE

The following procedure adopted from EPA SOP MB-31, modified for electrostatic spray application, will be followed to assess wetness.

1.1 Prepare a use-solution of each test substance in the intended diluent to target the lower limit of active ingredient, as directed.

1.2 For each use-solution, use three 150 × 20 mm glass Petri plates to represent the surface to be treated.

1.3 Pre-clean each carrier surface with 70% ethanol, rinse in deionized water and air dry. Record the weight (weight #1: dry and untreated).

1.4 Prime the Victory Cordless electrostatic sprayer with product, as necessary. Ensure the sprayer is set to the 80 micron setting.

1.5 Treat each of three carriers, per use-solution, following the intended spray conditions (time and distance) indicated previously. Monitor the contact time with a calibrated timer.

1.6 Re-weigh and record the results (weight #2: wet and treated).

1.7 Allow carriers to sit horizontally for the contact time in an environmental chamber set to approximately 35 ± 5% relative humidity and 20 – 25°C.

1.8 Weigh again and record the final weight (weight #3: post contact time).

1.9 Use a single dry sheet of Kim Wipe (e.g. 11 × 21 cm) to wipe the surface to visualization of wetness; record observations.

1.10 Document residual wetness by photography.

Interpretation of results / Acceptance criteria

The data must show the presence of free-liquid on the treated surface by weight and physical observations (presence of wetness in photograph, visual observation of Kim wipe).

Good Laboratory Practices (GLP) – NonGLP Statement:

This study will not be conducted according to Good Laboratory Practices as stated in 40 CFR Part 160 or 21 CFR Part 58.

Final Study File Archival:

Good Laboratory Practices (GLP) – NonGLP Statement:

This study will not be conducted according to Good Laboratory Practices as stated in 40 CFR Part 160 or 21 CFR Part 58.

Final Study File Archival:

Following the completion of the study, the original final report and raw data (or exact copy) will be archived at the Ecolab Schuman Campus in Eagan, Minnesota or at an approved off-site location. The study file will be maintained for at minimum the life of the commercial product plus four years.

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07/21/20
Date
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